

CLAIMS

1. A method for digital data transmission, in which the transmission is effected by modulating a carrier frequency and is disturbed by at least two different types of disturbance, the method comprising the following steps at the receiving end:

- a1) determining an estimate for the power of the received signal;
- 5 a2) determining an estimate for the signal-to-interference-plus-noise ratio of the received signal;
- b) supplying at least the estimates determined in the steps a1) and a2) to a decision unit, which decides on at least one dominant type of disturbance based on at least one predefinable decision criterion.

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2. A method as claimed in claim 1, characterized by the following further step:

- a3) determining an estimate for the signal-to-interference-plus-residual-noise ratio, in which in step b) also the estimate of the decision unit determined in step a3) is supplied.

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3. A method as claimed in claim 2, characterized in that prior to step a3) at least a measure for interference reduction, more particularly for interference suppression, is applied to the received signal.

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4. A method as claimed in one of the preceding claims, characterized by the following further step:

- c) equalization of the received signal based on the at least one dominant type of disturbance determined in step b).

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5. A method as claimed in claim 4, characterized in that the transmission is disturbed by noise, on the one hand, and common channel and/or adjacent channel interference, on the other.

6. A method as claimed in one of the preceding claims, characterized in that in the event of antenna diversity at least the steps a1), a2) and b), or the steps a1), a2), a3) and b) are carried out for each received sub-signal.

5 7. A method as claimed in claim 6, characterized in that furthermore the step c) is carried out for each received sub-signal.

8. A device for receiving digital data by means of modulation of a carrier frequency of transmitted data, the method comprising:

10 - a device (12) for determining an estimate for the power of the received signal;
- a device (10) for determining an estimate for the signal-to-interference-plus-noise ratio of the received signal; and
- a decision unit (14), which is coupled to the device (12) for determining an estimate for the power and to the device (10) for determining an estimate for the signal-to-interference-plus-noise ratio and is arranged for determining at least one dominant type of disturbance based on the estimates found on the basis of at least one predefinable decision criterion.

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9. A semiconductor module in which the method as claimed in one of the claims
20 1 to 7 is stored.